

WHAT IS CLAIMED IS:

1. A method, comprising:
transmitting an activation signal;
receiving a signal generated by a remotely located mobile transmitter in response to the activation signal;
determining a location of the remotely located mobile transmitter that has generated the received signal; and
predicting, based on a set of pre-determined rules, whether the remotely located mobile transmitter is likely to come within a warning zone proximate to a first vehicle.
2. The method of claim 1, further comprising:
generating an alert if it is predicted that the remotely located mobile transmitter will approximately intersect a warning zone proximate to the first vehicle.
3. The method of claim 1, further comprising:
generating an alert if it is determined that the remotely located mobile transmitter is within a pre-determined warning zone proximate to the first vehicle.
4. The method of claim 1, further comprising:
generating an alert selected from a plurality of alerts if it is determined that the remotely located mobile transmitter is within one of a plurality of pre-determined warning zones proximate to the first vehicle, the generated alert being associated with the one of a plurality of pre-determined warning zones.
5. The method of claim 1, further comprising:
ascertaining the location of the first vehicle.
6. The method of claim 5, wherein the ascertaining is based on ranging signals received from at least one reference signal emitter.
7. The method of claim 5, wherein the ascertaining is based on global positioning system (GPS) data.

8. The method of claim 5, wherein the ascertaining is based on differential global positioning system (DGPS) data.
9. The method of claim 1, wherein the determining is based on ranging signals received from at least one reference signal emitter.
10. The method of claim 1, wherein the determining is based on global positioning system (GPS) data in the signal received from the remotely located mobile transmitter.
11. The method of claim 1, wherein the determining is based on differential global positioning system (DGPS) data in the signal received from the remotely located mobile transmitter.
12. The method of claim 1, wherein the predicting is at least partially based on the speed of the remotely located mobile transmitter.
13. The method of claim 1, wherein the predicting is at least partially based on the bearing of the remotely located mobile transmitter.
14. The method of claim 1, further comprising:
establishing at least one warning zone proximate to the first vehicle; and
varying the at least one warning zone based upon activity of the first vehicle.
15. The method of claim 14, wherein the varying varies the size of the at least one warning zone in response to a change in a velocity of the first vehicle.
16. The method of claim 14, wherein the varying varies the shape of the at least one warning zone in response to a change in a heading of the first vehicle.
17. The method of claim 14, wherein the varying varies the shape of the at least one warning zone in response to manipulation of a control within the first vehicle.

18. The method of claim 14, further comprising:
updating the at least one warning zone at regular intervals.
19. The method of claim 1, wherein the predicting includes:
calculating a heading based upon current and prior locations of all mobile transmitters from the at least one remotely located mobile transmitter.
20. The method of claim 1, wherein the determining includes mapping the location of the remotely located mobile transmitter and the first vehicle using a mapping component.
21. The method of claim 1, further comprising:
distinguishing between multiple received signals from a single mobile transmitter;
and
selecting the most reliable signal of the multiple received signals.
22. The method of claim 1, wherein the warning zone is determined at least partially based on the location of the mobile transmitter relative to the first vehicle.
23. The method of claim 1, wherein the predicting is performed periodically at a frequency associated with motion of the first vehicle and the mobile transmitter.
24. An apparatus, comprising:
a transmitter configured to transmit an activation signal to a plurality of mobile transmitters located remotely from the receiver;
a receiver configured to receive electromagnetic signals from the plurality of mobile transmitters;
a processor configured to establish at least one warning zone proximate to the receiver;
a warning zone analyzer configured to analyze the received electromagnetic signals and to determine a likelihood of any of the mobile transmitters from the plurality

of transmitters intersecting the at least one warning zone according to a set of pre-determined rules; and

a user interface configured to communicate information to a user based upon information determined by the processor.

25. The apparatus of claim 24, wherein the warning zone analyzer includes:

a processor configured to determine position and heading information for the plurality of mobile transmitters based upon the analyzed electromagnetic signals.

26. The apparatus of claim 24, wherein the user interface is configured to communicate a user alert when the information determined by the processor has a pre-determined alert characteristic.

27. The apparatus of claim 26, wherein the pre-determined alert characteristic includes the determined likelihood exceeding a pre-determined probability.

28. The apparatus of claim 24, wherein the processor configured to establish at least one warning zone is configured to vary characteristics of the at least one warning zone based upon a changing location of the receiver.

29. The apparatus of claim 24, wherein the processor configured to establish at least one warning zone is configured to vary characteristics of the at least one warning zone based upon a changing speed of the receiver.

30. The apparatus of claim 24, wherein the processor configured to establish at least one warning zone is configured to vary characteristics of the at least one warning zone based upon a changing direction of the receiver.

31. The apparatus of claim 24, wherein the processor configured to establish at least one warning zone is configured to vary characteristics of the at least one warning zone based upon input from a user.

32. The apparatus of claim 24, further comprising:
a mapping component configured to provide geographical information regarding the location of the apparatus and any mobile transmitters from the at least one mobile transmitter.
33. The apparatus of claim 32, wherein the mapping component includes a position determining component configured to determine position based on ranging signals received from at least one reference signal emitter.
34. The apparatus of claim 32, wherein the mapping component includes a global positioning system (GPS) component.
35. The apparatus of claim 32, wherein the mapping component includes a differential global positioning system (DGPS) component.
36. The apparatus of claim 24, further comprising:
an inertial measurement unit (IMU) configured to determine inertial changes of the apparatus.
37. The apparatus of claim 24, wherein the warning zone analyzer is configured to determine the most reliable signal from a series of multi-path signals received from a single source.
38. The apparatus of claim 24, wherein the warning zone analyzer is configured to the highest priority signal from a plurality of received signals.
39. An apparatus, comprising:
means for transmitting an activation signal;
means for receiving a signal generated in response to an activation signal by a remotely located mobile transmitter;

means for determining a location of the remotely located mobile transmitter that has generated a signal; and

means for predicting, based on a set of pre-determined rules, whether the remotely located mobile transmitter is likely to come within a warning zone proximate to a vehicle.

40. An apparatus, comprising:

an activation component configured to receive an activation signal and activate the apparatus in response to the received activation signal;

a portable variable power source capable of changing between an inactive state and an active state in response to the activation component activating the apparatus;

a receiver configured to receive signals including geopositional information while the apparatus is activated;

a transmitter configured to transmit information associated with the received geopositional information.

41. The apparatus of claim 40, wherein the portable variable power source is rechargeable.

42. The apparatus of claim 40, further comprising:

a processor configured to determine information regarding the heading of the apparatus and to communicate the determined information to the transmitter to be transmitted.

43. The apparatus of claim 40, further comprising:

a processor configured to determine information regarding the speed of the apparatus and to communicate the determined information to the transmitter too be transmitted.

44. The apparatus of claim 40, further comprising:

a means for attaching the apparatus to a user.

45. The apparatus of claim 40, wherein the transmitter is further configured to provide error correcting.
46. The apparatus of claim 40, further comprising:
means for determining inertial changes of the apparatus.
47. The apparatus of claim 46, wherein the means for determining inertial changes includes an inertial measurement unit (IMU).
48. A method, comprising:
receiving an activation signal;
activating components of a device in response to the received activation signal;
receiving a signal including geopotential information;
transmitting information associated with the received geopotential information.
49. The method of claim 48, wherein the transmitting includes error correcting.
50. The method of claim 48, further comprising:
processing the received geopotential information to determine position information.
51. The method of claim 48, further comprising:
processing the received geopotential information to determine heading information.
52. The method of claim 48, further comprising:
processing the received geopotential information to determine speed information.
53. The method of claim 48, further comprising:
determining inertial changes of a receiver that performs the receiving.

54. The method of claim 53, wherein the determining includes:
determining a change in a speed of the receiver.
55. The method of claim 53, wherein the determining includes:
determining a change in a heading of the receiver.
56. The method of claim 48, wherein the receiving a signal including geopositional information includes:
receiving a ranging signal from at least one reference signal emitter.
57. The method of claim 48, wherein the receiving a signal including geopositional information includes:
receiving a global positioning system (GPS) signal.
58. The method of claim 48, wherein the receiving a signal including geopositional information includes:
receiving a differential global positioning system (DGPS) signal.
59. The method of claim 48, further comprising:
determining that the state of the power source should be changed to a dormant state according to pre-determined rules; and
changing the state of the power source to a dormant state when it is determined that the state of the power source should be changed to a dormant state.
60. An apparatus, comprising:
means for maintaining a power source in a dormant state;
means for receiving an activation signal;
means for changing the state of the power source to an active state in response to a received activation signal;
means for receiving a signal including geopositional information;

means for transmitting information associated with received geopositional information.

61. A system, comprising:

a plurality of mobile devices, each of the plurality of mobile devices being configured to receive and transmit signals, including signals containing geopositional information;

a vehicular device configured to respectively transmit and receive information to and from each of the plurality of mobile devices including an activation signal to activate each of the plurality of mobile devices within an activation range, the vehicular device being configured to receive signals including geopositional information, the vehicular device being further configured to process signals received from each of the plurality of mobile devices within the activation range, determine the proximity of each of the plurality of mobile devices to the vehicular device, and provide information to a user, based on pre-determined rules, regarding the proximity of any of the plurality of mobile devices determined to be likely to intersect a warning zone of the vehicular device.

62. A method, comprising:

transmitting an activation signal from a vehicular device;

receiving the activation signal by at least one of a plurality of mobile devices;

activating the at least one of a plurality of mobile devices in response to the activation signal;

receiving geopositional information by the at least one of a plurality of mobile devices;

transmitting information associated with the received geopositional information from the at least one of a plurality of mobile devices to the vehicular device;

receiving the transmitted information by the vehicular device;

determining the location of the at least one of a plurality of mobile devices relative to the position of a vehicle associated with the vehicular device;

predicting the probability of the at least one of a plurality of mobile devices intersecting a warning zone proximate to the vehicle according to pre-determined prediction rules; and

providing information to a user relating to the predicted probability based upon pre-determined user information rules.